

CLAIMS

What is claimed is:

1. An animal washing system, comprising:
an aeration subsystem; and
- 5 a cleaning subsystem adapted to receive a water flow and being coupled to the aeration subsystem and having an output port.
2. The animal washing system of claim 1 further comprising a carbonated soaping subsystem coupled to the cleaning subsystem.
3. The animal washing system of claim 2 wherein the carbonated soaping system comprises:
10 a three-way valve adapted to receive pressurized air on a first input and adapted to receive pressurized carbon dioxide on a second input, and having an output;
a first distribution block coupled to the output of the three-way valve and having a plurality of ports;
a first group of shampoo storage tanks, each storage tank having an input port coupled a
15 respective one of the ports on the first distribution block, and each tank having an output port;
a second distribution block coupled to the output of the three-way valve and having a plurality of ports;
a second group of shampoo storage tanks, each storage tank having an input port coupled a
respective one of the ports on the second distribution block, and each tank having an output port.
- 20 4. The animal washing system of claim 3 wherein each distribution block includes four ports and each group of shampoo storage tanks includes four tanks.
5. The animal washing system of claim 3 wherein the carbonated soaping system further comprises a carbon dioxide tank coupled to the first input of the three-way valve.
6. The animal washing system of claim 1 wherein the aeration subsystem comprises:
25 a compressor; and

an air distribution block including a plurality of air ports.

7. The animal washing system of claim 1 wherein the cleaning subsystem comprises:

a shampoo port;

a shampoo valve coupled to the shampoo port;

5 a distribution manifold having an output coupled to the shampoo valve and having a plurality of inputs;

a plurality of valves, each valve being coupled to a respective input of the distribution manifold and to the carbonated soaping subsystem;

a first aeration port;

10 a first aeration valve coupled to the first aeration port and to the aeration subsystem;

a rinsing port;

a water control valve coupled to the rinsing port and adapted to receive a second water flow;

a second aeration port;

a second aeration valve coupled to the second aeration port and to the aeration subsystem;

15 a user control valve coupled between the second aeration port and the rinsing port;

a flexible hose coupled to the output port; and

a spray unit coupled to the flexible hose;

8. The washing system of claim 7 wherein each of the valves comprises a solenoid valve.

20 9. The washing system of claim 7 wherein each of the aeration ports includes an air diffusion media unit positioned in the port.

10. The washing system of claim 7 further comprising:

a first flow restrictor adapted to receive the water flow; and

a second flow restrictor coupled between the water control valve and a source of the second water flow.

11. The washing system of claim 10 further comprising a plurality of check valves.

12. A washing system, comprising:

5 an aeration subsystem operable to provide pressurized air;
a soaping subsystem operable to provide a selected one of a plurality of shampoos responsive to selection inputs; and
a cleaning subsystem including a water input port adapted to receive a water flow, a soaping port coupled to the soaping subsystem to receive the selected shampoo, and an aeration port coupled
10 to the aeration subsystem to receive the pressurized air, and an output port, the cleaning subsystem operable in a soaping mode to combine the water flow and the selected shampoo and to aerate the combined water flow and selected shampoo, the cleaning subsystem providing the aerated combined water flow and selected shampoo from the output port, and the cleaning subsystem further operable in a rinsing mode to provide the water flow from the output port.

15 13. The washing system of claim 12 wherein the soaping subsystem is further operable to generate and store a plurality of carbonated shampoos, and is operable to provide a selected one of the carbonated shampoos responsive to the selection inputs.

14. The washing system of claim 12 wherein the cleaning subsystem includes an air diffuser positioned in the aeration port of the cleaning subsystem and coupled to receive the pressurized
20 air.

15. The washing system of claim 14 wherein the cleaning subsystem further includes a plurality of aeration ports, each aeration port including an air diffuser coupled to the aeration subsystem to receive the pressurized air.

16. The washing system of claim 15 wherein the cleaning subsystem further comprises a
25 rinsing port adapted to receive a second water flow, the cleaning subsystem operable in the rinsing mode to provide the water flow from the output port using substantially the second water flow.

17. The washing system of claim 16 wherein at least one aeration port is positioned downstream of the aeration port.

18. The washing system of claim 12 wherein the aeration subsystem includes a compressor.

19. A method of washing an object using a pressurized water source, the method comprising:

5 combining a cleaning fluid and the pressurized water;

diffusing pressurized air into the combined cleaning fluid and pressurized water; and

applying the combined cleaning fluid and pressurized water diffused with pressurized air to the object.

20. The method of claim 19 further comprising carbonating the cleaning fluid prior to

10 combining the cleaning fluid and the pressurized water.

21. The method of claim 19 wherein the operation of combining comprises injecting the cleaning fluid into a flow of the pressurized water.

22. The method of claim 19 wherein the cleaning fluid comprises shampoo and wherein the object comprises an animal.

15 23. A method of washing an object using a pressurized water source, the method comprising:

carbonating a cleaning fluid;

combining the carbonated cleaning fluid and the pressurized water; and

applying the combined carbonated cleaning fluid and pressurized water to the object.

24. The method of claim 23 further comprising diffusing air into the combined carbonated

20 cleaning fluid and pressurized water prior to applying this combined solution to the object.

25. The method of claim 23 wherein the operation of combining comprises injecting carbonated cleaning fluid into a flow of the pressurized water.

26. The method of claim 23 further comprising storing the carbonated cleaning fluid under pressure.

27. The method of claim 26 further comprising storing a plurality of different carbonated cleaning solutions under respective pressures.
28. The method of claim 23 wherein the cleaning fluid comprises shampoo and wherein the object comprises an animal.